

Comprehensive® Reverse Shoulder System

Technical Design Features

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1 Humeral Stem

- 45/135 degree anatomic neck angle
- PPS® coating proximally to enhance biologic fixation
- Reverse Morse taper allows for easier glenoid accessibility

2 Humeral Joint Space Options

- Available joint space options ranging from 5 to 18mm, depending on humeral tray and bearing selections

3 Humeral Tray

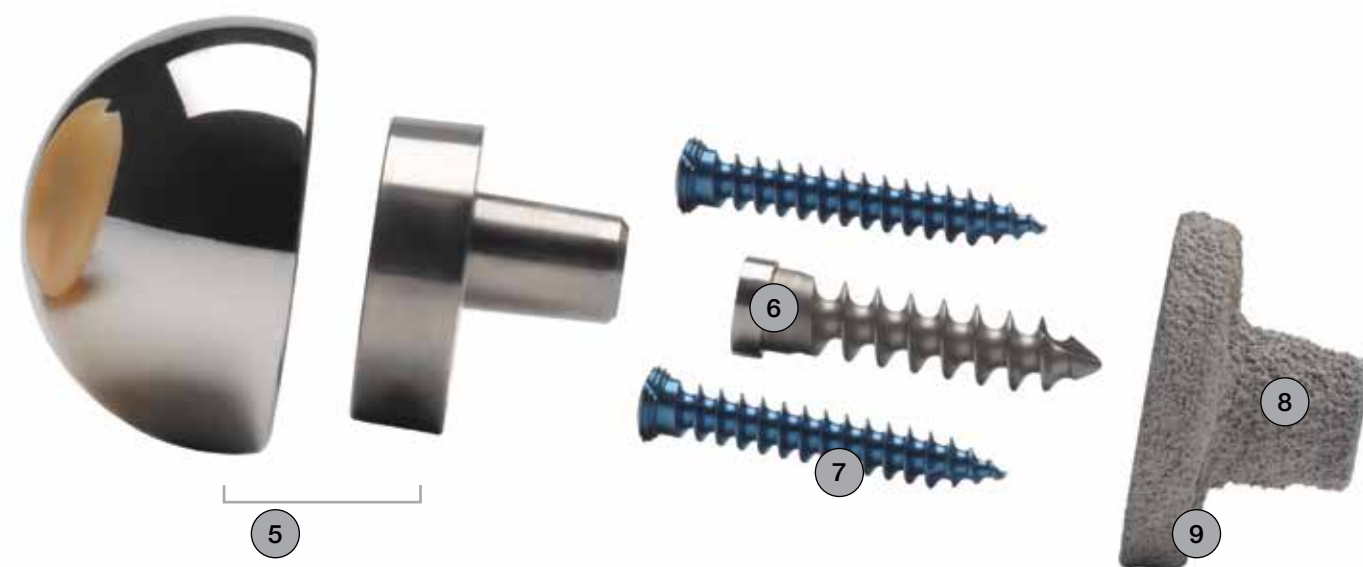
- RingLoc® technology: an expanding ring that locks around the humeral bearing providing for optimal mechanical strength and ease of bearing exchange
- Morse taper connection between humeral tray and stem for easy conversion of a well-fixed humeral stem to a reverse

4 E1® and ArComXL® Polyethylene Humeral Bearing Options

- Minimum 3mm thickness between the articulating surface radius and the bottom of the bearing
- Bearing constraint height of up to 12.6 mm
- Retentive options capture 2–3 mm more of the glenosphere surface without increasing deltoid tension

5 Versa-Dial® Glenosphere

- Center of rotation for neutral option is medialized, lying approximately 1mm below the face of the baseplate
- Dual taper design underwent extensive fatigue testing for 10,000,000 cycles without failure³
- Variable offset technology allows flexibility in positioning the baseplate to take advantage of ideal glenoid bonestock
- Inferior positioning of the glenosphere with respect to the glenoid potentially increases ROM and decreases impingement thereby minimizing scapular notching⁴



6 Modular 6.5mm Central Screw

- 10 times more compression than baseplates with a central peg alone²
- 2.3 times more shear strength than baseplates with a central peg alone²

7 Peripheral Locking Screws

- Tested favorably against accepted standard for micromotion and biologic fixation (150 μ m)¹
- Increases glenoid baseplate stability²

8 Central Boss Geometry

- Provides additional shear resistance during deltoid functions³
- Allows for modular 6.5mm central compression screw

9 Glenoid Baseplate

- HA over PPS[®] porous coating on back and sides for a total interference fit of approximately 1mm providing for increased biologic fixation
- May be partially recessed to potentially increase shear stability
- 5 degree diverging angulation in peripheral screw holes
- Instrumentation provides for 10 degree inferior tilt of glenoid baseplate to maximize implant stability²
- Mini (25 mm) and standard (28 mm) diameters

References

1. Jasty, M.; Bragdon, C.; Burke, D. *et al.* In Vivo Skeletal Responses to Porous-Surfaced Implants Subjected to Small Induced Motions. *Journal of Bone and Joint Surgery (Am)*. 79: 707–14, 1997.
2. Fankle, M. Biomechanics of A Reverse Shoulder Total Prosthesis. San Diego Shoulder Course. pgs. 55–110. San Diego, CA 2007.
3. Data on file at Biomet.
4. Kelly, J.; Humphrey, S.; Norris, T.; *et al.* Optimizing Glenosphere Position and Fixation in Reverse Shoulder Arthroplasty, Part One: The Twelve-mm Rule. *Journal of Shoulder and Elbow Surgery*, July/August: 589–594, 2008.

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